

REMARKS

By the present amendment, Applicant has amended Claims 1, 9, and 16. Claims 1-17 remain pending in the present application. Claims 1, 9, and 16 are independent claims.

Applicant appreciates the courtesies extended to Applicant's representative during the personal interview held February 23, 2007. The present response summarizes the understandings and agreements reached and the substance of the interview. At the interview arguments were advanced: 1) that the drawings, for example Fig. 2, reference numbers 1-8, and the specification at page 10, lines 14 and 15, do show the "means for uniquely identifying each of the shades in spectrum"; and 2) that the Nowak (3,844,641) reference does not possess a test section of a first color and a reference section displaying a spectrum of shades of the test color including the selected shade, as was claimed in original Claims 1 and 16. Reference was made Nowak's column 3, lines 63-68 through column 4, lines 1-28. The Examiner indicated that: 1) the drawings do show the claimed "means for uniquely identifying each of the shades..." and the drawing objection would be withdrawn; 2) that Claims 1 and 16 should be amended to recite that the test color and the reference section spectrum of that color are simultaneously displayed; and 3) that Claims 1 and 16 should be amended to recite language in the body of the claim that referenced the "measuring differences in transmission of light...." found in the preamble of these claims.

In the recent Office Action the Examiner rejected Claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over Evans (5,078,486) in view of Nowak (3,844,641), and Claims 16 and 17 were held to be unpatentable over Evans ('486) in view of Hunt et al (3,801,188).

Applicant has amended independent Claims 1 and 16 to incorporate the suggested subject matter discussed at the Interview. Applicant has amended independent Claim 9 in a similar fashion and has further amended Claim 9 to recite other distinguishing structure over the prior art. Applicant will advance arguments hereinbelow to illustrate the manner in which the presently claimed invention is patentably distinguishable from the cited and applied prior art. Reconsideration of the present application is respectfully requested.

The instant application is directed to apparatus and method for measuring differences in the transmission of light through a lens of an eye. As is well known, light enters through the lens of an eye and then reaches the retina. When less light enters through the lens, the perceived shade of any given color darkens. The color itself does not change; only the shade changes as it relates to light intensity. This variation in shade of the color, when the color itself is constant, relates to differences in light entry into the eye. There are multiple examples of this all around us. For example, in bright sunlight, the color of green grass is very light, yet the shadow of a tree on the green grass darkens the perceived shade of green.

If a cataract develops in one eye the perceived shade of a given color may be darker than that perceived by the other eye. When both eyes are open and viewing that color, the brain merges the color and one perceives a color somewhere between the dark and light shades of the color. The instant application uses this phenomenon to determine differences in perception of shades of a given color between the two eyes. The eye which perceives the darker shade is likely to have impaired transmission of light through the lens. The prior art cited does not identify this principle, nor provide an apparatus or method for its study or detection. Applicant's claims are directed to the fact that color changes are easier to detect and quantify than are changes in light intensity itself. However, since the shade of the color relates to light intensity, one can use the color shade to judge light intensity as it passes through the lens of the eye.

The Evans ('486) reference is directed to a self-calibrating vision test apparatus that provides an internal light source generating a constant, predetermined light intensity in the vicinity of the eye chart. Evans is concerned with providing illumination of an eye chart which would minimize any change in the eye exam related to poor or variable illumination of the eye charts. Evans does not measure transmission of light through the lens of the eye; it simply provides a light source which would be constant during the eye exam. Evans describes the eye charts used on column 7, lines 20-31. No disclosed eye chart suggests the claimed apparatus or method.

The Nowak et al ('641) reference is directed to a device for diagnosing and correcting eye fusion, that is, making both eyes of a person work as one, and detecting when one eye is suppressed or when eyes work alternately. Although Nowak uses shades of colors, their usage is for a different ocular problem. Nowak's disclosure does not use a spectrum in shades of a color to determine the changes in the transmission of light through the lens of an eye since Nowak is concerned with detecting or diagnosing eye suppression or good eye fusion. To detect or diagnose this type of ocular problem, Nowak uses two charts simultaneously, wherein each has a light color background and indicia of the same color but of a darker shade. In the reference section there is only a single darker color; there is no spectrum of shades of the test section color that is displayed simultaneously and which includes the test color; see column 3, lines 63-68 through column 4, lines 1-28. Therefore, the Nowak reference does not possess the claimed structure and the rejection of claim1 should be withdrawn. The issue of whether it would have been obvious to modify Evans' device with the teachings of Nowak is moot in view of the fact that Nowak does not possess the claimed structure.

In regard to Claim 9, the Nowak device does not possess a chart having the test section displaying solely a first shade of a color with an adjacent reference section displaying solely a second shade of the test color; nor does it possess first and second illuminating means as claimed. The reason Nowak does not possess the claimed structure is based upon the fact that Nowak is not directed to or concerned with measuring differences in transmission of light through a lens of an eye. In the Nowak disclosure, it is seen that the two charts are placed side-by-side, viewed through a prism, reflecting mirror, or a

telebinocular instrument so adjusted that the two charts will be fused together, and the patient should detect all of the indicia on both charts. This is not "An apparatus for measuring differences in transmission of light through a lens of an eye using shades of color and brightness of color that are perceived by the eye ... to determine whether the eye has impaired transmission of light through the lens." It is respectfully submitted that the rejection of Claim 9 has been overcome and should, therefore, be withdrawn.

In regard to Claim 16, the Examiner states that the Evans device has means for adjusting the light intensity. Applicant notes that the adjustable light intensity is merely for providing a constant level of illumination on the eye chart and not for altering the light intensity based upon an eye diagnosis for cataracts. The Examiner also contends that Hunt et al ('188) disclose "a method for eye testing by illuminating the test color section and a reference section and asking the patient to match the colors of the test section to the colors of the reference color section." However, claim 16 is distinguished from the Hunt reference section as follows: 1) the Hunt test is for color vision deficiency which is a different ocular problem than cataracts; 2) the Hunt reference section is not only of shades of the test section color but includes "... the complete hue circle from red, through orange, yellow, green, blue" (column 4, lines 29-41); and 3) the Hunt reference section array does not include unique identifying indicia for each shade; rather the patient "...is asked to say which colour or colours in the array match the reference colour." (column 3, lines 64-68). This latter difference is also a reason for the use of unique identification of the different shades of the color. Hunt asks the patient to identify the color because to test is for color deficiency. Applicant's shades of color are used to measure differences in light transmission through the

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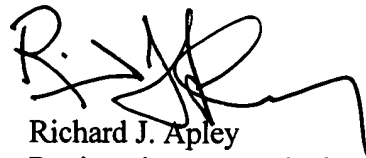
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lens of an eye to determine whether the eye has impaired transmission. By having each shade of the spectrum possessing unique identifying indicia, the patient need not be confused by similar shades; rather the patient need only reference the corresponding unique indicia. It is respectfully submitted that claim 16 avoids the rejection and should be allowed.

The claims in this application have been revised to more particularly define Applicant's apparatus and method in view of the prior art of record. Reconsideration of the claims in light of the amendments is respectfully requested.

For the foregoing reasons, Applicant respectfully submits that the present application is in condition for allowance. If such is not the case, the Examiner is requested to kindly contact the undersigned in an effort to satisfactorily conclude the prosecution of this application.

Respectfully submitted,


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